NEOTROPICAL MIGRATORY BIRDS

Introduction

Neotropical migratory birds are defined as those birds that regularly winter south of the Tropic of Cancer and summer in North America. Fifty-four of these have declining population trends in either the western U.S. or Montana. Of these, 28 are associated with forested habitats (Paige, 1990). Within forests, two especially important habitats to bird species are: 1) riparian habitat, because of the availability of water and variety of plant communities, and 2) old growth habitat, which has the highest density and diversity of birds nesting in tree cavities (McClelland and Schmidt 1995). In addition, snags, broken-topped live trees, downed logs, and other woody material are required by a wide variety of these species for nesting, denning, roosting, perching, feeding, and cover. These species and their habitat relationships (Hutto 1995, deGraaf et al. 1991) are listed below (Table 3-114).

Table 3-114. Neotropical Migratory Birds that are Associated with Forested Habitats and that appear to have Declining Population Trends. See Exhibits Rn-1 and Rn-2 for more information.

Bird Name	General Habitat Summary	Old-Growth Associate	Snag Nester	Riparian Associate
Mourning Dove	Cottonwoods, edges, farmland			
Sharp-shinned Hawk	Dense forests			
Cooper's Hawk	Mature conifers/deciduous			
American Kestrel	Open ponderosa pine/cottonwood		X	
Flammulated Owl +	Open ponderosa pine/mixed forest	X	X	
Common Nighthawk	Open forests, grasslands			
Vaux's Swift *	Forests of large trees with openings	X	X	
Eastern Kingbird	Farmland, riparian bottomlands			X
Olive-sided Flycatcher *	Logged or burned forests			
Western Wood-pewee	Open conifer forests			
Hammond's Flycatcher	Tall trees with closed canopies	X		
Cordilleran Flycatcher *	Conifers/deciduous			
Northern Oriole	Tall shrubs and trees near streams			X
Cassin's Finch	Conifer forests/early post-fire forest			
Chipping Sparrow *	Open dry forests, edges			
Black-headed Grosbeak *	Cut-over forests, riparian thickets/ forests			X
Western Tanager *	Dry, open mature conifers			
Red-eyed Vireo	Aspen, cottonwood, riparian habitat			X
Solitary Vireo *	Young conifer forests, logged areas			
MacGillivray's Warbler *	Moist conifer forests, dense shrubs			X
American Redstart *	Riparian shrubs, aspen, cottonwood			X
Yellow-rumped Warbler*	Young to mature open forest, edges			

Bird Name	General Habitat Summary	Old-Growth Associate	Snag Nester	Riparian Associate
Wilson's Warbler *	Riparian thickets, willow			X
Gray Catbird	Dense riparian shrubs			X
Ruby-crowned Kinglet *	Tall conifers with dense canopy			
Veery	Deciduous riparian forest			X
Swainson's Thrush *	Conifer forests with dense shrubs	X		X
Western Bluebird	Open forests, edges, roadsides		X	

+ = Flathead National Forest Sensitive Species
* = Species observed in analysis area during surveys; 1994-2002

Information Sources

The effects on Neotropical migrants are discussed via analysis presented in this chapter in the sections on "Old Growth Habitat and Old Growth Associated Species," "Snags and Downed Wood Material Wildlife Habitat." Riparian habitats were assessed by way of the Riparian Landtype Polygon coverage in the Flathead GIS library (Exhibit Rn-3). Species occurrence was evaluated through bird transects conducted from 1994 through 2003 by the USFS Northern Region Songbird Monitoring Program (Exhibit Rn-4). No impacts on the peregrine falcon or flammulated owl (both USFS sensitive species) would be expected (Exhibits Rs-7 and Rs-11).

Analysis Area

All lands within the boundaries of the Beta, Doe, Blackfoot, and Ball Fires (Exhibit Rg-2) were considered for the evaluation of direct and indirect effects on Neotropical migratory birds. This approximately 49 square mile area (about 32,000 acres) is large enough to include numerous home ranges of numerous wildlife species and is representative of effects of fires, natural tree mortality, timber harvest, and firewood cutting across the landscape. All of the actions proposed in the alternatives that could directly or indirectly affect this resource are contained within this area. The remaining area on the west side of Hungry Horse Reservoir was added to the above for the consideration of cumulative effects, totaling approximately 270 square miles (about 172,900 acres; Exhibit Rg-2). Wildlife population viability concerns at the Flathead National Forest and larger scales are assessed in Exhibit Rg-5.

Affected Environment

Populations of forest-associated birds that breed in the western United States appear to be affected by forest fragmentation in breeding habitat (Hejl et al., 1995). Harvest and excessive tree mortality further contribute to short-term fragmentation (Rotenberry et al., 1995). However, when sufficient downed woody material, residual understory trees, and

windfirm live trees and snags are available, timber harvest or salvage may maintain adequate habitat values for many of these bird species. The USFS Northern Region Songbird Monitoring Program (Hutto 1995a) has provided some data on population trends, habitat relationships, and effects from past management activities for Neotropical migratory birds breeding in the western United States. These have been combined to determine population trends on a continental, regional, statewide, or physiographic region scale. For more information, see Exhibits Rn-1 and Rn-2.

Overall, the area provides a considerable diversity of forested habitats, including old growth, snag, and downed wood habitats, as well as riparian areas. The existing condition of habitats important for migratory birds are described in the sections of this chapter on "Old Growth Habitat and Old Growth Associated Wildlife Species" and "Snags and Downed Woody Material Wildlife Habitat." For more information about wildlife habitat conditions across the Flathead National Forest relevant to Neotropical migrants, see the Final Environmental Impact Statement for the Flathead's LRMP Amendment 21 (USDA 1999a) and Exhibit Rg-5.

Riparian habitats are found throughout the West Side Reservoir Fires Project area (Table 3-115). Most of the species listed as "riparian associates" in Table 3-114 above use the dense shrubs and deciduous trees found in these habitats.

Table 3-115. Riparian habitats across the West Side Fire Areas (Exhibit Rn-3).

Riparian Habitat	Beta/ Doris	Doe	Blackfoot	Ball
LAKE	5 ac	0 ac	1 ac	0 ac
FL2D (Valley bottom, gravel substrate, cottonwood community along perennial river)	0 ac	0 ac	0 ac	40 ac
NL1E (Nearly level, poorly drained fine substrate, wetland in sedge/willow community)	2 ac	0 ac	3 ac	1 ac
NL2A (Nearly level; gravel substrate; in subalpine-fir/spruce forest community along perennial stream)	0 ac	0 ac	1 ac	222 ac
SL2A, SL3A, SL5A (Slightly sloping; gravel or boulder substrate; in subalpine-fir/spruce forest community typically along perennial streams)	19 ac	5 ac	84 ac	26 ac
MS3A, MS4A, MS5A, VS3A, VS4A (Moderately to very steep; boulder or bedrock substrate; in subalpine-fir/spruce community along perennial or intermittent streams) *	31 ac	0 ac	40 ac	19 ac
WL5A (springs, seeps, and wet depressions in subalpine-fir/spruce forest communities) *	10 ac	0 ac	25 ac	39 ac

* These types are often not included in the Forest-wide GIS coverage but are typically discovered during field surveys and harvest unit layout. These acreages represent minimum amounts.

Of the 28 species listed in Table 3-114, 13 were documented in the cumulative effects analysis area during bird transects conducted by the USFS Northern Region Songbird Monitoring Program (Hutto 1995a) from 1994-2004 (Exhibit Rn-4). The Olive-sided Flycatcher and Cassin's Finch are associated with post-fire habitats and may benefit from the 2003 fire. Species that may be found in open forests, such as the Western Tanager, Vaux's Swift, Chipping Sparrow, Yellow-rumped Warbler and Western Wood Pewee

may benefit from fires that reinitiate the understory but do not consume all the large trees. Species such as the Sharp-shinned Hawk, Cooper's Hawk or Ruby-crowned Kinglet may be found in a variety of forest types and could be impacted by the loss of cover, as well as nesting and foraging habitat. Riparian birds may be displaced into less suitable habitats and/or concentrated in those riparian areas that remain relatively intact after the fires. Riparian shrubs generally grow back quickly following a fire as long as the burn severity is not so severe that the vegetative portion below the surface of the ground is damaged.

Environmental Consequences

Effects on old growth habitat and old growth associated species relate directly to three issues discussed in Chapter 1. These are Issue #1, "Not enough snags are being left on the landscape", Issue #9, regarding uncertain and recruitment old growth, and Issue #10, regarding burned-up old growth. The issue indicators used involve: acres of salvage harvest in these types of former, current, and future old growth habitat; average density of large larch and Douglas-fir after salvage across salvage units that support these trees; and percent of area with high densities of large larch and Douglas-fir after salvage. Issue #5, which includes open road density standards, is relevant due to the vulnerability of snag and downed wood habitats to firewood cutting.

The action alternatives would remove primarily snags and downed wood used as nesting and feeding substrates and as cover. Proposed road access changes would reduce vulnerability of nesting structures to firewood cutting. Many of the direct and indirect effects on habitats important for migratory birds are described in the sections of this chapter on "Old Growth Habitat and Old Growth Associated Wildlife Species," "Snags and Downed Woody Material Wildlife Habitat." In particular, see Tables 3-89, 3-91, and 3-96. The impacts of alternatives upon the riparian habitats listed above in Table 3-115 are discussed in the next section.

Direct and Indirect Effects

Alternative A – No Action

No timber salvage, harvest, or rehabilitation actions are proposed with this alternative. Overall, this alternative would leave habitats across the analysis area to continue with relatively natural processes. Abundant large fire-killed snags would provide potential habitat for birds that excavate cavities, and subsequently for secondary cavity nesters, including some Neotropical migrants. Areas with heavy fire mortality and blowdown would provide structural diversity, downfall trees, and long-standing snags. Downed logs, shading from snags, and lack of seed sources may delay the recovery of new trees in some areas with high levels of dead trees (See the "Vegetation" section of this chapter). The probability of fire would increase in such areas as dead trees fall and new understory growth contributes fine fuels.

Alternatives B, C, D, and E

Salvage logging is known to further reduce overall species richness beyond any decrease wrought by the fire (Sexton 1998). Due to the differing responses of individual species to tree size class and density, leaving variable clump sizes, variable diameter sizes, and non-treated areas under these alternatives would help assure that suitable habitat is maintained and well distributed for a variety of species. All action alternatives would retain the largest-diameter western larch and Douglas fir snags dispersed in the salvage units. However, in Alternatives D and E, only the largest diameter western larch and Douglas fir snags would be retained in the salvage units and many large-diameter snags would be removed. Long-term snag and downed wood values may be less than optimal for some Neotropical migrant species in many salvaged units. Alternative C would drop many areas of possible post-fire old growth habitat and recruitment old growth that would typically provide the best areas for snag patches within the units. In all action alternatives, removal of some of the dead trees planting of trees would accelerate regeneration of green canopy cover.

Protection of riparian habitats will occur through a combination of protective measures in the Montana Streamside Management Zone Law, Montana Water Quality Act, and INFISH standards (See Fisheries Section). Requirements of the Montana Streamside Management Zone (SMZ) Law would be followed for all treatments within or adjacent to wetland or riparian zones. Buffers have been designed to minimize the effects on riparian habitat. Montana SMZ law requires a minimum 50-foot buffer on all streams. Fish bearing streams will have a 300-foot buffer, and non-fish bearing streams will have a 150-foot buffer. Ponds, lakes, or wetlands greater than 1 acre will have a 150-foot buffer, and those less than 1 acre will have a 100-foot buffer (see Fisheries section). Harvest in R units would be the exception to these protections.

Salvage harvest activities between May and August may have direct effects on nesting Neotropical Migrants. Although little is known about the effects of salvage logging in stand replacement fires on these species, it is expected that salvage of snags would have a slight negative effect on potential population numbers of cavity nesting neotropical migratory birds. Logging and tree felling during the nesting season may cause nest failure and death to both adults and young. Noise from the various activities proposed during the breeding season may impact juvenile dispersal, cause premature displacement of young, or cause young to be prematurely abandoned. Some temporary displacement of Neotropical migrants is likely to occur.

Cumulative Effects

Many of the cumulative effects described in the sections of this chapter on “Old Growth Habitat and Old Growth Associated Wildlife Species” and “Snags and Downed Woody Material Wildlife Habitat” are relevant to Neotropical migratory birds. These include loss and alteration of habitat to timber harvest and the construction of Hungry Horse Reservoir, as well as habitat lost to the hazard tree removal efforts and the larch heart-rot study. Cumulative effects on riparian bird habitat are believed to be tied to the presence

or absence of dense shrub cover and deciduous trees (Hutto, 1995). Saab and Rich (1997) list threats, species, and relevant habitats of concern on the scale of the Columbia River Basin. See Exhibits Rn-1 and Rn-2 for more information about cumulative effects on these species. The affected environment described above has been shaped by past and present cumulative effects. These effects would be cumulative to those discussed above for each alternative.

REGULATORY FRAMEWORK

The Migratory Bird Treaty Act (MBTA) implements various treaties and conventions between the U.S. and Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. Under the Act, taking, killing, or possessing migratory birds, including nests and eggs, is unlawful. A list of Neotropical migrants protected by the Migratory Bird Treaty Act is provided in 50 CFR 10.13. In January 2001, an executive order was signed outlining responsibilities of federal agencies to protect migratory birds under the Migratory Bird Treaty Act. As a complimentary measure to the Executive Order, the Forest Service and the U.S. Fish and Wildlife Service entered into a Memorandum of Understanding (MOU) the purpose of which is to strengthen migratory bird conservation through enhanced collaboration between the agencies, in coordination with state, tribal, and local governments. This MOU serves as guidance for the two federal agencies until more detailed direction is developed following the Executive Order. The U.S. Fish and Wildlife Service published "Birds of Conservation Concern 2002", which recommends that its lists be consulted in accordance with E.O. 13186. Some migratory birds are covered by state hunting regulations; others are protected by non-game status with the Montana Department of Fish, Wildlife, and Parks. There are currently no Flathead Forest Plan Standards specific to migratory birds.

REGULATORY CONSISTENCY

All alternatives provide for a variety of habitats for Neotropical migratory birds. Each alternative would benefit some Neotropical migrant species more than others, but each would provide suitable habitat for migrants. The intent of the MTBA, the 2001 Executive Order, and the MOU to conserve and protect Neotropical migrants would be met under all alternatives in all West Side Reservoir areas. See Exhibit Rg-5 for an assessment of Neotropical Migratory Bird population viability concerns at the Flathead National Forest and larger scales.

None of the birds on the U.S. Fish and Wildlife Service list of "Birds of Conservation Concern 2002" were observed in the cumulative effects analysis area during bird surveys conducted from 1994-2002 (Exhibit Rn-4). The flammulated owl and the peregrine falcon are sensitive species, and are discussed in this EIS and in other sections of the Project Record (Exhibits Rs-7, Rs-11, and Rs-23).